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NPIC/R-159/63  
July 1963

PHOTOGRAPHIC INTERPRETATION REPORT

# MISSILE-ASSOCIATED FACILITY

## NEAR EMBA, USSR



CIA

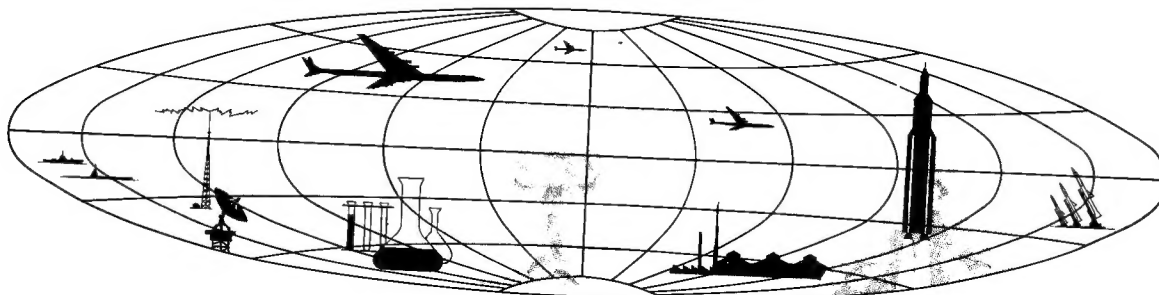


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PREFACE

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This report, prepared in response to CIA requirement OSI/289/62  
[redacted] presents a photographic  
study of the missile-associated facility near Emba, USSR.

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The only photography of this installation is that provided [redacted]  
[redacted] The quality  
and small scale of this photography preclude the determination of  
exact measurements and the assigning of definite functions to many  
buildings and areas.

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### SUMMARY

The Emba Missile-Associated Facility appears to be a major testing or research and development facility rather than an operational-type missile facility. It was still under construction [redacted] the date of the latest photography, and the particular type of missile activity cannot be determined at this time.

The facility includes a probable launch area with associated support facilities and a separate administrative and logistical support area.

The launch-associated facilities, located in the southern part of the installation, consist

of a probable launch area, a technical support area, and an instrumented range containing eleven instrumentation sites which form a bell-shaped pattern extending approximately 35 nautical miles (nm) in a south-southwesterly direction.

The administrative and logistical support area, located in the northern part of the installation, includes a rail-served support area A and an adjoining airfield with a 7,500 foot runway.

### INTRODUCTION

The Emba Missile-Associated Facility at 48-45N 58-04E (Figure 1) is under construction

south of Emba, a town on the Kazakh railroad system 275 nm northwest of Tyura Tam.

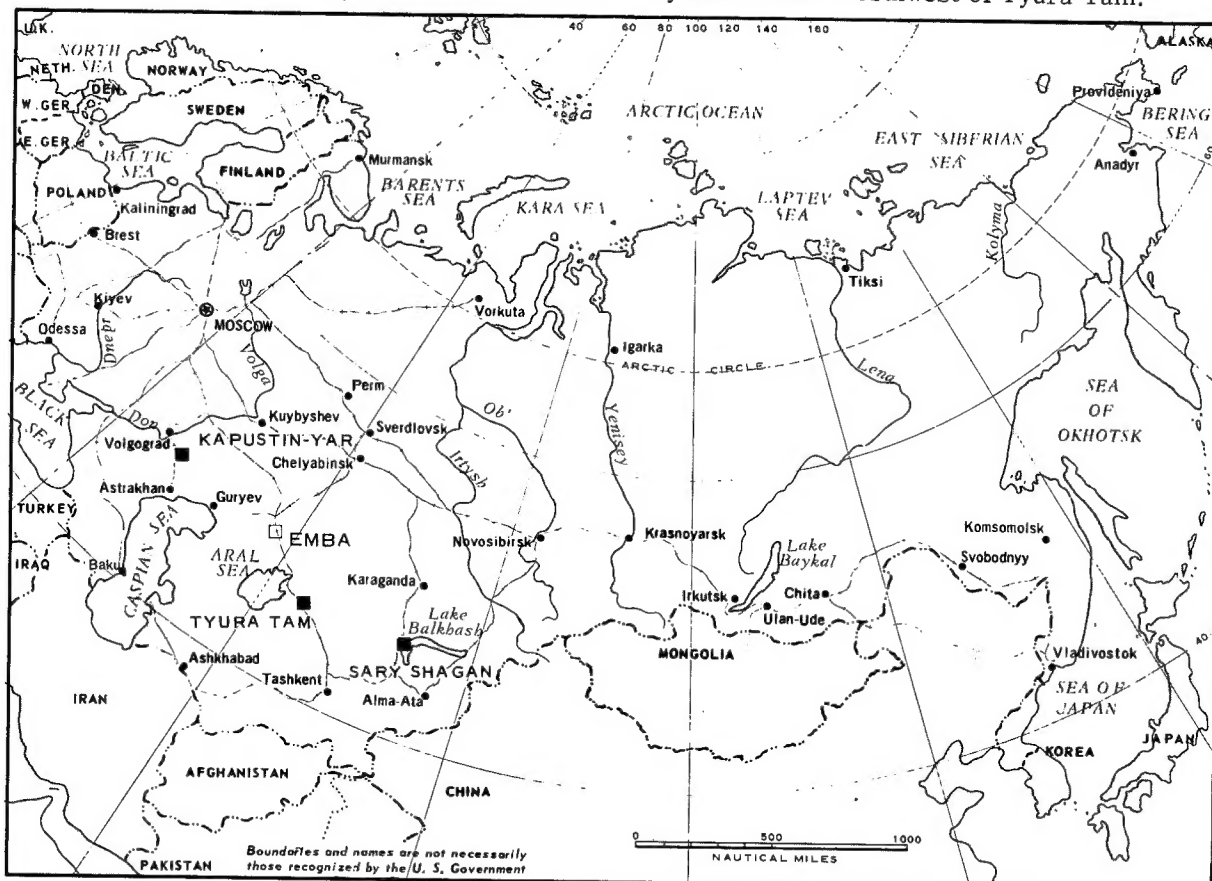


FIGURE 1. LOCATION OF EMBA.

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FIGURE 2. MISSILE-ASSOCIATED FACILITY AT EMBA

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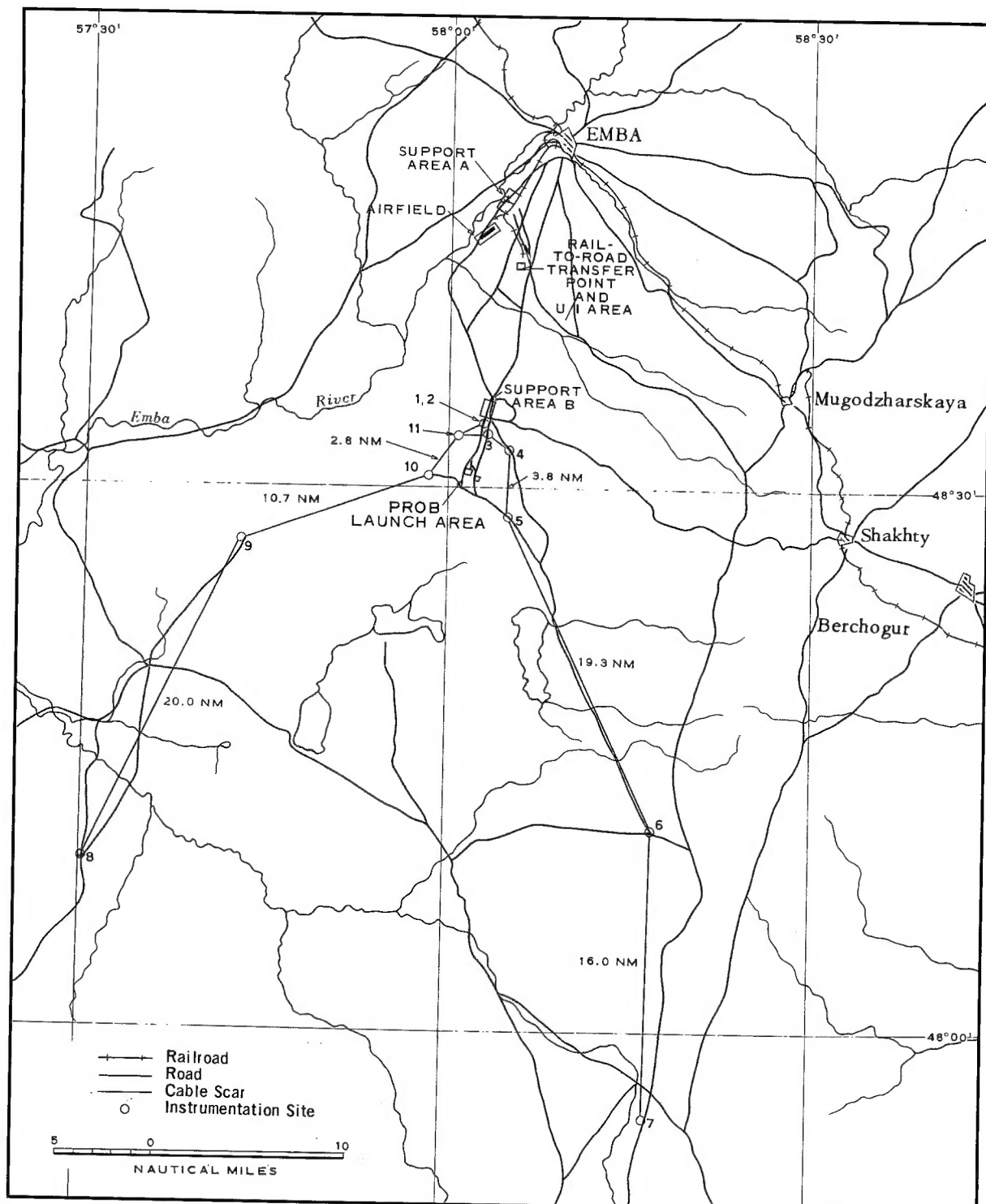


FIGURE 3. LAYOUT OF FACILITIES.

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25X1 This facility was first observed [redacted]  
 25X1D [redacted] The  
 25X1 only available photo coverage of this area prior  
 25X1 to this date was [redacted] photography [redacted]  
 25X1D [redacted]  
 25X1D [redacted] Although snow covered, this photography  
 showed no evidence of a railroad or construction  
 activity in the area south of Emba.  
 25X1D [redacted] the following [redacted]  
 25X1D [redacted] missions have provided fair pho-  
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tography of this facility [redacted]  
 [redacted]  
 This report is based on a study of the  
 photography resulting from the [redacted]  
 [redacted] missions (Figures 2 and 3) and de-  
 scribes the changes resulting from construction  
 activity [redacted]

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# SUPPORT AREA A

Support area A is located 4 nm south-  
 southwest of Emba, on the east bank of the  
 Emba River (Figure 4). This support base,  
 which occupies an area 9,000 by 5,000 feet,  
 contains about 114 buildings and two sets of  
 rail sidings having a total length of 10,000  
 feet. This appears to be the main support  
 base. A rail line from this base joins the main  
 railroad at Emba.

The buildings are primarily grouped into  
 two separate areas. The northern area appears  
 to be an administrative and housing area and  
 contains 56 buildings, most of which measure  
 about 50 by 25 feet. The southern area con-  
 tains 33 buildings, most of which measure 130  
 by 30 feet, and appears to be a barracks or  
 warehouse area. There are approximately 25  
 additional buildings on the base, of which five  
 are major buildings, measuring from 150 to  
 215 feet long and from 40 to 65 feet wide.

This support base is still under con-  
 struction. Of the present 114 buildings, two  
 major buildings and 23 others had been con-  
 structed [redacted]  
 Earth scarring throughout the area indicates  
 preliminary activity for future construction.

Two sets of rail spurs are located im-  
 mediately south of the building areas. One

set, composed of three rail spurs, each 1,500  
 feet long and 225 feet apart, points northward  
 toward the building areas. The western-  
 most spur appears to serve a possible heating  
 plant located near the end of the spur, and may  
 be elevated to facilitate unloading of material  
 from hopper cars. The other two spurs do  
 not appear very active on any of the [redacted] missions  
 [redacted] The second  
 set of rail spurs points southward and is com-  
 posed of three rail spurs, each 1,800 feet  
 long and 375 feet apart, plus a short 600-  
 foot rail spur which terminates in a "Y"  
 fork.

The southern set of rail spurs appears  
 more active than the northern set. On [redacted]  
 [redacted] photography a few small warehouses  
 and a little open storage were visible. Pho-  
 tography [redacted] revealed that a few  
 additional small warehouses had been con-  
 structed, additional material was being stored  
 in the open areas between the rail spurs, and  
 the short 600 foot long rail spur had been  
 constructed [redacted] Construction activity  
 is probably still in progress since the full  
 capabilities of these rail sidings did not appear  
 to be in use.

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# EMBA AIRFIELD

Emba Airfield is located 6.5 nm south-west of Emba and just south of Support Area A (Figure 5). The airfield has a single graded-earth runway, 7,500 feet long by 650 feet wide and oriented northeast/southwest. An electronics landing facility, possibly a TOKEN radar, is located approximately 4,000 feet south-east of the south end of the runway. The airfield is rail- and road-served by the same system that serves support area A.

The runway appeared serviceable [redacted] the date of the earliest photography of this airfield. Construction activity, however, is still in progress. The width of the runway

had doubled [redacted] The only large building at the airfield, 130 by 30 feet, was constructed [redacted] Earth scarring and construction activity are apparent near the north end of the runway in the vicinity of the railroad terminus. Increased track activity is apparent throughout the airfield area.

Three medium-sized transport aircraft and ten smaller unidentified aircraft were present at the airfield [redacted] Aircraft were possibly present on the [redacted] earlier missions, but poor photo quality precluded a determination of number or type.

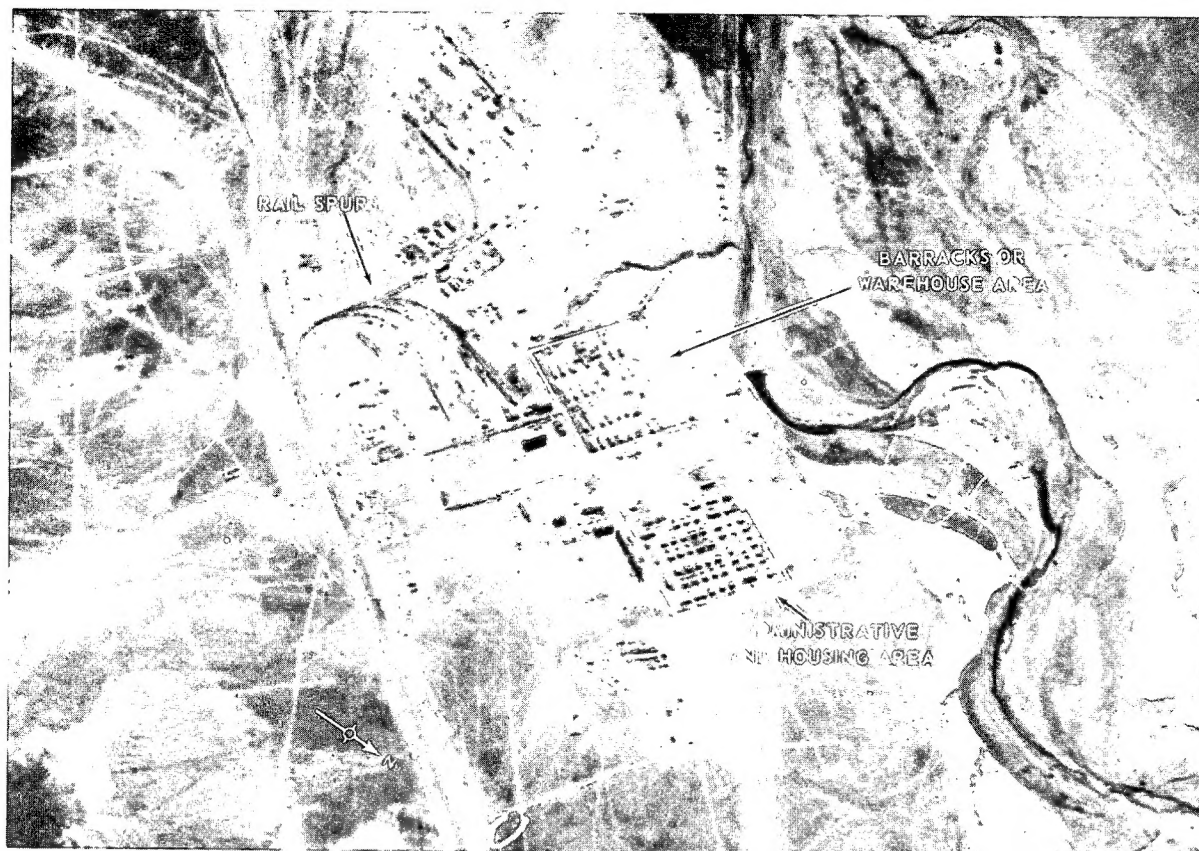


FIGURE 4. SUPPORT AREA A [redacted]



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# UNIDENTIFIED FACILITY AND RAIL-TO-ROAD TRANSFER POINT

An unidentified facility and an adjacent rail-to-road transfer point (Figure 6) are located 3 nm south-southeast of support area A at the terminus of the railroad line from Emba.

The unidentified facility occupies a rectangular area approximately 1,500 by 1,100 feet which contains six large buildings and five small structures. The largest building measures 170 by 65 feet and the other five buildings each measure approximately 125 by 50 feet. Earth scarring around the periphery of this area may be ditches. On the eastern edge of the facility a short rail spur appears to

lead to a large pit, 150 by 80 feet, which has a spoil pile or a building at its southern edge. This unidentified facility appears active, but no significant change in the area was apparent

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The rail-to-road transfer point is located just north of the unidentified facility at the end of a 4,000-foot long rail spur. No buildings are evident at this transfer point, but some materials appear to be stored in the open near the rail terminus. Roads leading from this transfer point connect with all major facilities. There was no apparent change in this area

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## SUPPORT AREA B

Support area B (Figure 7) is located 11 nm south of support area A and 8 nm south of the rail-to-road transfer point. This support

area, which occupies an area 5,000 by 1,600 feet, contains approximately 25 buildings probably used for shops, barracks, or storage. It



FIGURE 5. EMBA AIRFIELD

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is located just north of the rangehead instrumentation sites and probably provides support for the operations at the instrumentation sites

and the probable launch area. There was no apparent significant change in this support area [REDACTED]

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#### PROBABLE LAUNCH AREA

The probable launch area is located 3 nm south-southwest of support area B and 19 nm south-southwest of the town of Emba. The probable launch area (Figure 8) is enclosed in a rectangular double-fenced area measuring approximately 1,600 by 1,300 feet. The road pattern within the fenced area forms a rectangle approximately 800 by 600 feet, with an offset, north-south, center road (Figure 9). The roads appear to be hard surfaced and on a slight fill in order to maintain a common level. On the inside of both the east and west parallel roads is a white square area, approximately 75 feet on a side, which may be a vehicle hardstand or possibly the initial stages of launch pad construction. A low build-

ing or hardstand, 180 by 75 feet, is located on the northwest edge of the rectangular road pattern, and two small buildings are located near the northwest corner of the center offset road. Three small buildings, one of which is bunkered, are located just northeast of the fenced area and appear to be directly associated with operations in the probable launch area.

Outside the probable launch area, the roads do not appear to be graded or surfaced to provide smooth and finished access from the support facilities. While it is apparent that this area is still under construction, little significant change was noted in the probable launch area [REDACTED]

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FIGURE 6. UNIDENTIFIED AREA AND RAIL-TO-ROAD TRANSFER POINT [REDACTED]

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A smaller double-fenced area, 1,000 by 800 feet, is located approximately 2,000 feet southeast of the probable launch area. A few small buildings or bunkers are discernible with-

in the fenced area, but the quality of the photography precludes a more detailed description of this area. There was no apparent change in this area

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### INSTRUMENTATION

The eleven instrumentation sites associated with this facility form a bell-shaped pattern oriented in a south-southwesterly direction. Three of the instrumentation sites are located near the apex of the bell-shaped pattern just north of the probable launch area. Four of the instrumentation sites form the eastern leg

of the pattern which extends for 40 nm, and four sites form the western leg of the pattern which extends for 33 nm. The distance across the range between the most southern instrumentation site on each leg is 35 nm. Figure 3 shows the instrumentation pattern and the approximate distance between the sites.



FIGURE 7. SUPPORT AREA B

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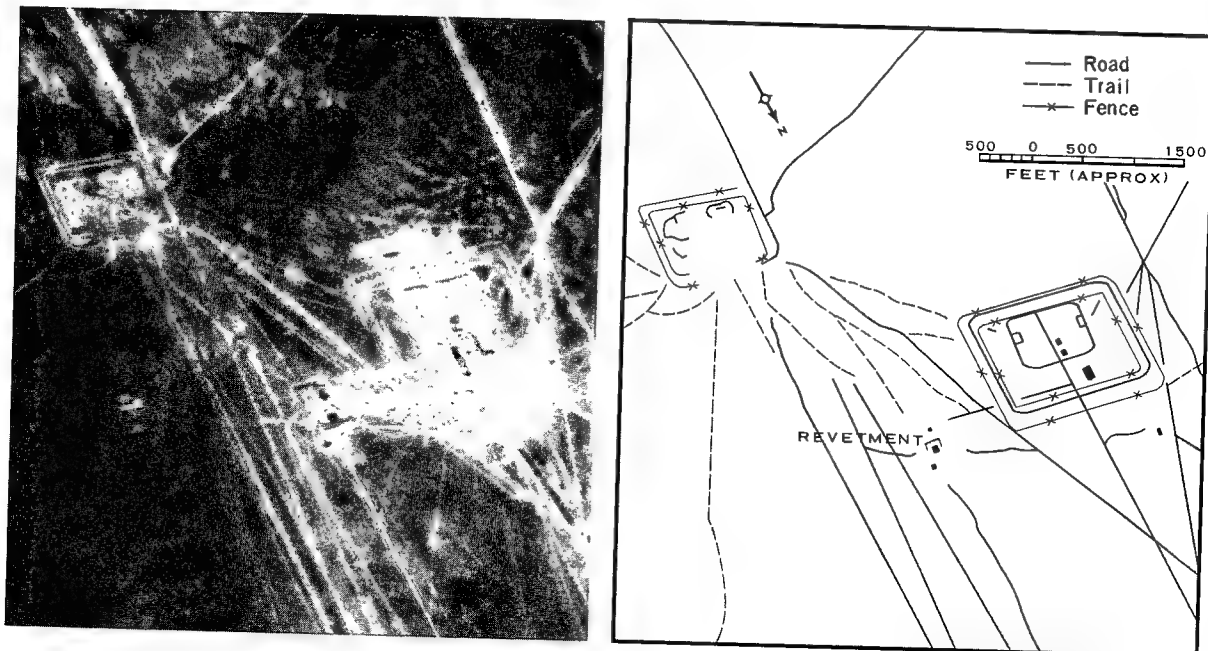


FIGURE 8. PROBABLE LAUNCH AREA

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Five of these sites--sites 2, 6, 7, 8, and 9-- are extensively developed and similar in layout design. Figure 10 shows instrumentation site 6, which is typical of these five sites, except that it is the only site secured by fencing. In addition to a few support buildings, each of these five sites is characterized by a unique arrangement of five buildings in a row. A large rectangular building, 175 by 40 feet, is flanked on each side by two smaller square buildings, 40 by 40 feet. The major, or long, axis of this row of buildings at sites 6, 7, 8, and 9 appears to lie parallel to and looking in toward the nominal flight line. These four major sites are located the farthest from the probable launch area and are the last two sites on each leg of the instrumentation pattern. Site 2, however, which is similar, is located at or near the apex of the pattern in the vicinity of the probable launch area. This site has the same arrangement of five

buildings in a row, but the long axis of these buildings is perpendicular to the range axis and looks down the nominal line of flight.

These five sites appear to contain more instrumentation than any identified instrumentation site at known Sino-Soviet missile test centers. The identification of these areas as instrumentation sites is based on the point-to-point interconnection of earth scars, the typical arrangement of the sites along the nominal flight line, and the similarity of this instrumentation pattern to that at Shuang-cheng-tzu 1/ and Kapustin Yar/Vladimirovka Missile Test Center. 2/

The remaining six instrumentation sites--sites 1, 3, 4, 5, 10, and 11-- are smaller than the others and cannot be described in detail from available photography. However, sites 4, 5, 10, and 11 appear to be similar, each consisting of a single, possibly circular, building.

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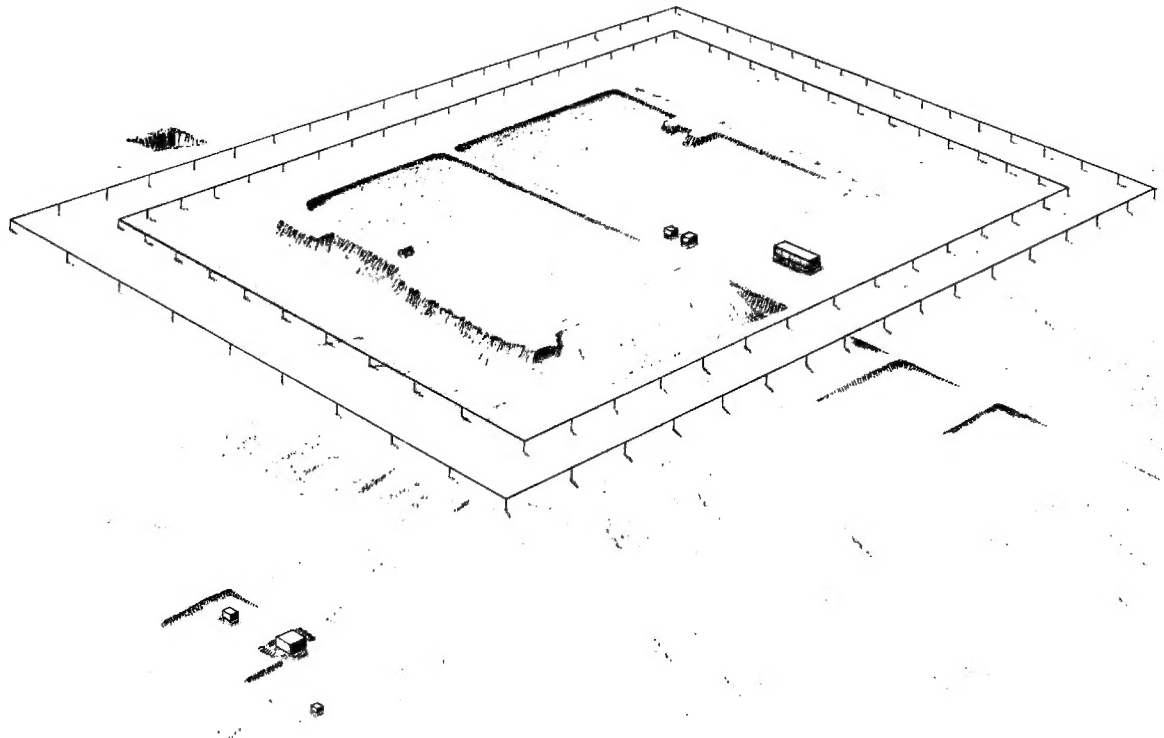


FIGURE 9. CONCEPT OF PROBABLE LAUNCH AREA.

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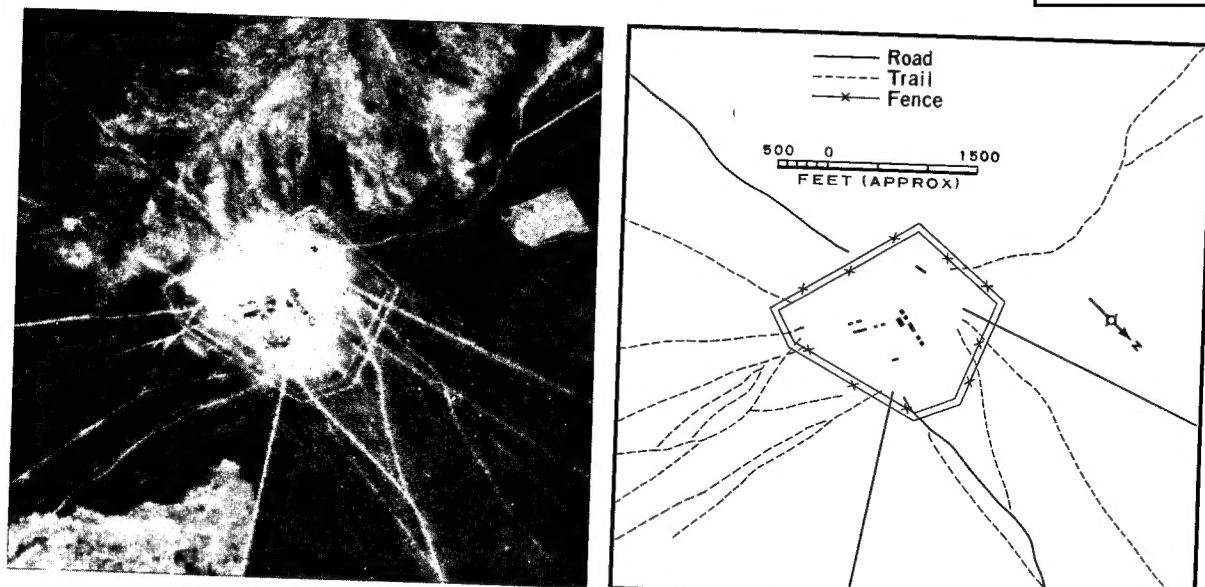


FIGURE 10. INSTRUMENTATION SITE 6

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# CONSTRUCTION ACTIVITY AT INSTRUMENTATION SITES

25X1 There was no apparent change [ ]  
 25X1D [ ] at instrumentation sites 1, 2, 3, 4, 5, 10, and 11. Construction activity was very apparent, however, at sites 6, 7, 8, and 9, the four major sites farthest from the launch and support areas. Several miles of new earth scarring or forest clearing, indicative of new roads, trails, pipelines, cables, and/or powerlines connect these sites to each other and to the rangehead area.

Site 7. The five characteristic buildings and two support buildings were apparent on [ ] photography [ ] a few additional buildings were observed and the building construction appeared completed. There was no apparent change in the buildings [ ]

Site 8. [ ] photography no buildings were present and only the initial stages of site clearing were observed [ ] the site clearing appeared completed and [ ] the initial stages of building construction were apparent [ ] the buildings appeared to be completed.

Site 9. On [ ] photography the site was cleared and initial building construction was evident. On [ ] photography the buildings appeared to be completed, and there was no apparent change in the buildings [ ]

25X1D Building construction at the four major sites (6, 7, 8, and 9) was in various stages of completion [ ]  
 25X1D photography it appeared that building construction had been completed, since all four sites had now attained the same characteristic building layout pattern. The following description of changes in these sites [ ]  
 25X1D [ ] shows the rate of progress in building construction.  
 25X1D Site 6. The buildings appear completed on [ ] photography and no apparent change  
 25X1D was noted [ ]

## DOWN-RANGE INSTRUMENTATION

25X1D The area south of the Emba facility between the Aral and Caspian Seas and approximately 600 nm to the Iranian border was searched on [ ] photography, but no identifiable instrumentation sites or major electronics installations were observed. This area south of the facility encompasses thousands of square miles of the desolate Plato Ustyurt and Peski Karakumy that could serve as impact areas.

Five large probable geological prospecting camps were observed at various isolated locations in the eastern half of the Plato Ustyurt

west and southwest of the Aral Sea. These camps are very similar in design, each contain 25-30 buildings, and are characterized by very intensive track activity within a few miles of the camp area. While it appears that the primary function of these camps is gas or oil prospecting, the possibility does exist that, in this forbidding area where logistics is such a major problem, some type of instrumentation or electronics may be associated with these camps. A large-scale, low-oblique photograph of one of these camps may be found in USSR Illustrated Monthly. 3/

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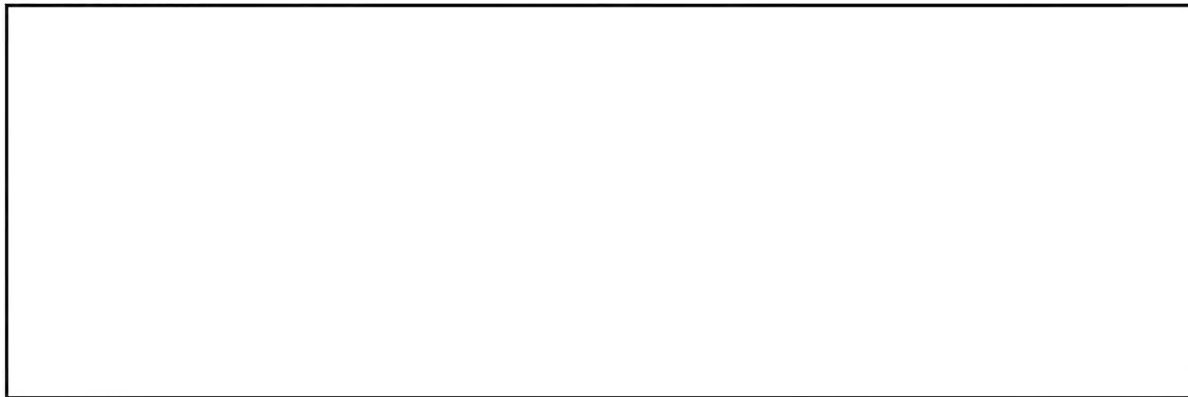


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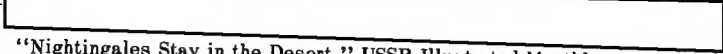
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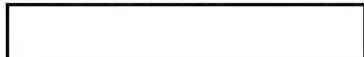
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2. CIA. PIC/JR-1008/61, Surface-to-Air Missile Facilities, Kapustin Yar/Vladimirovka Missile Test Center, USSR, Mar 61 (SECRET )
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REQUIREMENTS

CIA. OSI/289/62



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